

REMARKS

At the time of the Office Action dated April 11, 2003, claims 1-20 were pending and rejected in this application. Claim 16 has been amended to clarify that an extension section is slidably adjustable between one of at least two positions relative to a driver section. Applicants submit that the present Amendment does not generate any new matter issue.

With regard to the first through third enumerated paragraphs of the Office Action, accompanying this Amendment is a Request for Approval of Drawing Amendment and proposed drawing corrections for Figs. 1b and 7a, as discussed in the Amendment filed January 21, 2003.

Claim 1 is rejected under 35 U.S.C. § 102(b) for lack of novelty as evidenced by Kingery et al., U.S. Statutory Invention Registration H86 (hereinafter Kingery)

In the fifth enumerated paragraph of the Office Action, the Examiner asserted that Kingery discloses a shock tube corresponding to that claimed. This rejection is respectfully traversed.

Claim 1 recites that shock absorbent material is disposed in a cavity defined by a driver section and an extension section. In the paragraph spanning pages two and three of the Office Action, the Examiner referred particular to column 2, lines 9-11 of Kingery to disclose the claimed shock absorbent material. Column 2, lines 9-24 is reproduced below with certain portions being emphasized by underlining:

Other approaches included the use of vented plates, perforated plates with absorbent material, solid plates with absorbent material, and single rows of bars. All of these approaches, however, are limited to the pressure range over which they can operate efficiently. Further, none

of these approaches provide any adjustable control over the magnitude of the reflected wave and/or the time when the reflected wave reaches the test object.

SUMMARY OF THE INVENTION

1. Objects of the Invention

It is a general object of the present invention to overcome the aforementioned drawbacks for such shock tubes.

Upon reviewing this citation, it is apparent that the teaching referred to by the Examiner is in the Background of the Invention of Kingery. Furthermore, Kingery teaches that the approach of using absorbent material is limited as to pressure range and does not provide any adjustable control. As such, one having ordinary skill in the art would understand that the absorbent material disclosed by Kingery is not associated with the shock tube disclosed in columns 4-10 of Kingery. As such, the Examiner has failed to establish that one having ordinary skill in the art would have recognized that the identically claimed invention is within the public domain.

Furthermore, even *assuming arguendo* that the disclosure of an absorbent material in the Background of the Invention of Kingery could somehow be associated with the disclosure of the shock tube in columns 4-10, the Examiner has failed to establish that Kingery identically discloses each feature of the claimed invention. As previously discussed, claim 1 recites that the absorbent material is disposed in a cavity defined by a driver section and an extension section. Although Kingery discloses that the absorbent material is formed on a plate, Kingery fails to disclose exactly where this plate is located. As such, the Examiner has not established that Kingery identically discloses disposing the absorbent material in the cavity defined by the driver section and the extension section.

Furthermore, referring to column 1, lines 64-67, a plate is referred to by Kingery as being offset from the discharge end of the shock tube, and the object of the plate is to reflect a wave into the shock tube toward the test object. As the test object is located within the shock tube, the plate disclosed by Kingery appears to be outside of the tube. Applicants, therefore, respectfully submit that the imposed rejection of claim 1 under 35 U.S.C. § 102 for lack of novelty as evidenced by Kingery is not factually viable and, hence, solicit withdrawal thereof.

Claims 1-6 are rejected under 35 U.S.C. § 103 for obviousness based upon Osofsky, U.S. Patent No. 5,197,323, in view of Legate, U.S. Patent No. 5,996,570

In the seventh enumerated paragraph of the Office Action, the Examiner concluded that one having ordinary skill in the art would have been motivated to modify the shock tube of Osofsky in view of the archery bow stabilizer of Legate to arrive at the claimed invention. This rejection is respectfully traversed.

Initially, Applicants respectfully submit that Legate is non-analogous prior art that cannot be applied against the claimed invention. Whether a prior art reference is from a nonanalogous art involves (a) determining whether the reference is within the same field of endeavor and (b) determining whether the reference reasonably pertinent to the particular problem with which the inventor is involved.¹ If the prior art is outside the inventor's field of endeavor, the inventor will only be presumed to have knowledge of prior art that is reasonably pertinent to the problem being addressed.² The Examiner is also charged to consider "'the reality of the circumstances' ... in other words, common sense" to determine what field a person of ordinary skill in the art

¹ In re Clay, 23 USPQ2d 1058 (Fed Cir. 1992).

² In re Wood, 202 USPQ 171 (C.C.P.A. 1979).

would reasonably be expected to look.³ With regard to this issue, the Examiner is also referred to M.P.E.P. § 2141.01, entitled "Analogous and Nonanalogous Art."

Whereas the claimed invention is directed to shock tubes (i.e., devices used for testing the effects of shock waves), the apparatus of Legate is used to stabilize an archery bow (column 1, lines 5-7). Thus, the shock tube of the claimed invention and the archery bow stabilizer of Legate are not within the same field of endeavor. Furthermore, the claimed invention is directed to, in part, solving the problem of how to provide an idealized target load by controlling rarefaction and secondary shock waves (page two of Applicants' disclosure). In contrast, Legate describes a device that reduces muscle fatigue by absorbing vibration produced when the bow is used. As Legate is silent as to rarefaction and secondary shock waves, common sense would dictate that Legate is not reasonably pertinent to providing an idealized target load. Thus, Legate is non-analogous prior art that cannot be applied against the claimed invention.

Notwithstanding that Legate is non-analogous prior art, the Examiner has not established a prima facie basis to deny patentability to the claimed invention under 35 U.S.C. § 103 for lack of the requisite factual basis and lack of the requisite realistic motivation.⁴ The Examiner asserted that Legate teaches the use of a shock absorbent material 42 to absorb vibrations within a tube. The Examiner, however, has apparently overlooked the teaching in Legate that "enough material 42 should be used so that the material substantially fills the spaces between the outside surface of

³ In re Oetiker, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992).

⁴ In rejecting a claim under 35 U.S.C. § 103, the Examiner is required to identify a source in the applied prior art for: (1) claim limitations; and (2) the motivation to combine references or modify a reference in the reasonable expectation of achieving a particular benefit. Smiths Industries Medical System v. Vital Signs Inc., 183 F.3d 1347, 51 USPQ2d 1415 (Fed. Cir. 1999). In so doing, it is legally erroneous to ignore any claim limitation. Uniroyal, Inc. v. Rudkin-Wiley Corp., 837 F.2d 1044, 5 USPQ2d 1434 (Fed. Cir. 1988).

the shock absorber assembly 18 and the inside surface of tube interior region 20" (column 5, lines 4-7). As such, *assuming arguendo* that one having ordinary skill in the art were motivated to modify Osofsky in view of Legate, the shock absorbent material 42 would necessarily fill the shock tube as taught by Legate. Such a modification, however, would likely render the shock tube of Osofsky inoperable. As such, Applicants respectfully submit that one having ordinary skill in the would not have considered, as obvious, modifying Osofsky in view of Legate to add shock absorbent material 42 into the shock tube.

Applicants also note that the Examiner has again failed to establish that the applied prior art teaches where in the shock tube the shock absorbent material would be located. Additionally, the Examiner has not established a motivation to modify Osofsky in view of Legate to dispose the absorbent material in the cavity defined by the driver section and the extension section. Applicants, therefore, respectfully submit that the imposed rejection of claims 1-6 under 35 U.S.C. § 103 for obviousness based upon Osofsky in view Legate is not viable and, hence, solicit withdrawal thereof.

Claims 7-8 and 12-21 are rejected under 35 U.S.C. § 103 for obviousness based upon Osofsky in view of Lacey, Jr. et al., U.S. Patent No. 5,505,081 (hereinafter Lacey)

In the eighth enumerated paragraph of the Office Action, the Examiner concluded that one having ordinary skill in the art would have been motivated to modify the shock tube of Osofsky in view Lacey to arrive at the claimed invention. This rejection is respectfully traversed.

Claim 7 recites at least one active vent disposed over a respective hole in the extension section connected to a cavity defined by the extension section. On page four of the Office Action, the Examiner admits that Osofsky fails to disclose this particular limitation but asserts that Lacey teaches two or more active vents. Specifically, the Examiner asserts that features 45, 46 of Lacey correspond to the active vents of the claimed invention. In this regard, Applicants refer to the Amendment filed on January 21, 2003, in which Applicants stated the following:

As part of a prima facie analysis of obviousness, the Examiner is to construe each term in the claim consistent with the specification. See 37 C.F.R. § 1.56(b)(2)(ii). This allows Applicants fair opportunity to evaluate the teachings of the applied prior, as compared to the claimed invention. As discussed in M.P.E.P. § 706.02(j), "[it] is important for an examiner to properly communicate the basis for a rejection so that the issues can be identified early and the applicant can be given fair opportunity to reply." The Examiner, however, has failed to construe the term "active vent" consistent with the specification. As described on page 10 of Applicants' disclosure: "an active vent ... opens at the initiation of a positive pressure phase and closes near the end of the positive pressure phase or the beginning of the negative pressure phase." There is no indication that the pressure release door 56 of McCabe is so capable. As such, one having ordinary skill in the art would not recognize the pressure release door of McCabe as teaching or suggesting the claimed active vent.

Although this paragraph referred to a patent to McCabe, the exact same arguments can be applied to the vents 45, 46 of Lacey. Furthermore, as illustrated in Figs. 3 and 4 of Lacey, the vents 45, 46 are located at a rearward wall 52, which together with an inner surface 44 of a sleeve 36 and an inner surface of a forward closure wall 50 define an air dump volume or chamber 40 (column 5, lines 52-54). This location of the vents 45, 46, however, is nowhere near an extension section, as recited in claim 7. As such, *even if* one having ordinary skill in the art were motivated to modify Osofsky in view of Lacey, the claimed invention would not result, as Osofsky and Lacey, either alone or in combination, fail to teach or suggest at least one active vent disposed over a respective hole in an extension section connected to a cavity defined by the extension section.

Applicants note that claim 16 has been amended to clarify that the extension section is slidably adjustable between one of at least two positions relative to the driver section. In

contrast, Osofsky and Lacey, either alone or in combination, fail to teach or suggest a slidable relationship between an extension section and a driver section. Although Lacey teaches that a length of the extension can be adjusted, this length adjustment is a result of adding extension sections 21 and not by sliding the extension section relative to the driver section, as recited in claim 16. Thus, Applicants respectfully submit that the imposed rejection of claims 7-8 and 12-21 under 35 U.S.C. § 103 for obviousness based upon Osofsky in view of Lacey is not factually or legally viable and, hence, solicit withdrawal thereof.

Claims 9-11 are rejected under 35 U.S.C. § 103 for obviousness based upon Osofsky in view of Lacey and Spyche, Jr., U.S. Patent No. 5,598,904 (hereinafter Spyche)

In the ninth enumerated paragraph of the Office Action, the Examiner concluded that one having ordinary skill in the art would have been motivated to modify the shock tube of Osofsky in view Lacey and Spyche to arrive at the claimed invention. This rejection is respectfully traversed.

The Examiner's citation to Spyche only presents one form of an energy absorption device, but this reference does not provide the motivation to modify Osofsky in view of Lacey to provide an active vent over a hole in an extension section, as previously argued. Applicants, therefore, respectfully submit that the imposed rejection of claims 9-11 under 35 U.S.C. § 103 for obviousness based upon Osofsky in view Lacey and Spyche is not viable and, hence, solicit withdrawal thereof.

Applicants have made every effort to present claims which distinguish over the prior art, and it is believed that all claims are in condition for allowance. However, Applicants invite the

Application No.: 10/046,911

Examiner to call the undersigned if it is believed that a telephonic interview would expedite the prosecution of the application to an allowance. Accordingly, and in view of the foregoing remarks, Applicants hereby respectfully request reconsideration and prompt allowance of the pending claims.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417, and please credit any excess fees to such deposit account.

Respectfully submitted,

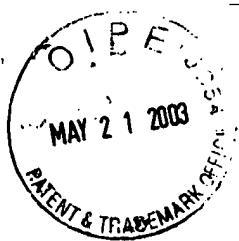
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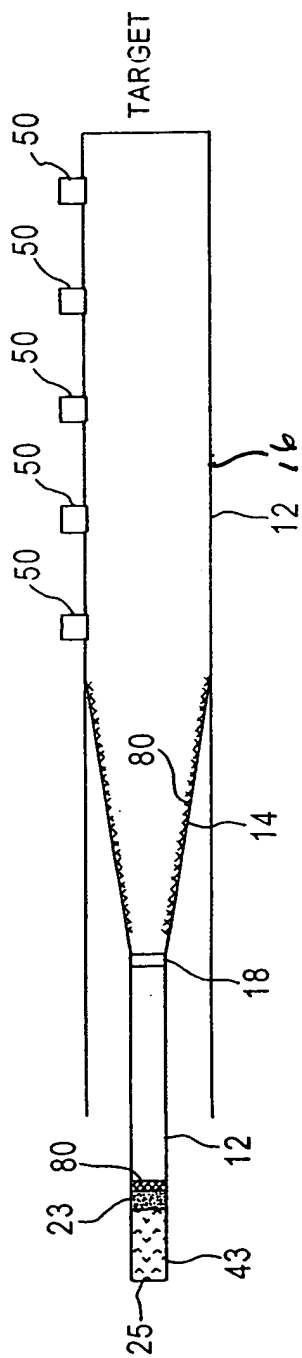


FIG. 1b

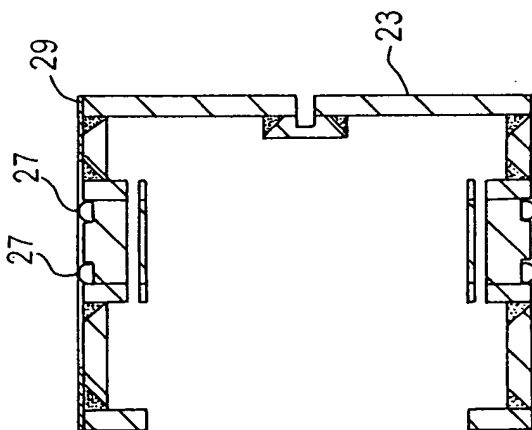


FIG. 2b

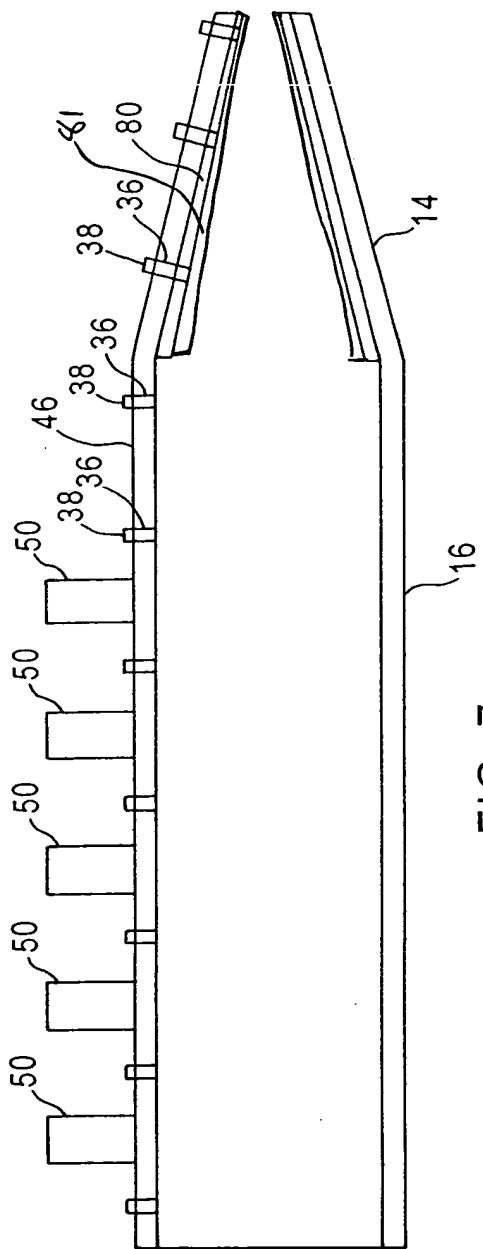


FIG. 7a

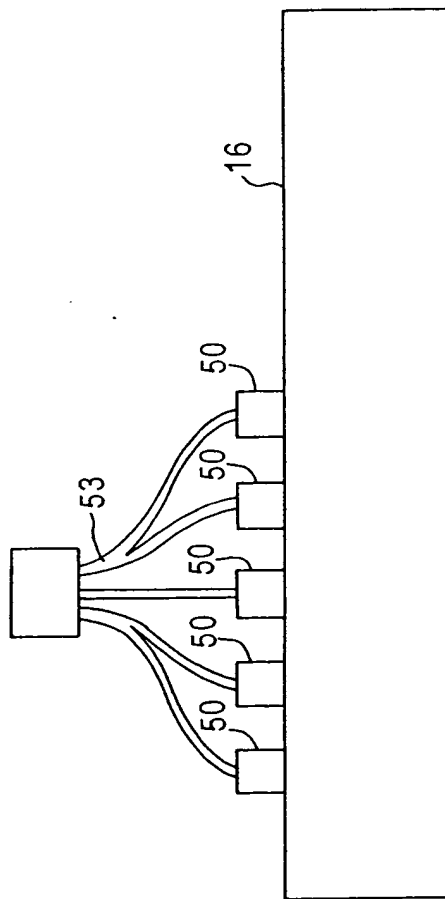


FIG. 7b